

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-000703**Date Inspected:** 26-Oct-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 1430**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2300**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Xu Le Feng**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Mock Up**Summary of Items Observed:**

Elevation 89:

The Caltrans Quality Assurance (QA) Inspector Charlie Franco was present at the time requested to randomly observe welding and associated operations being performed for the fabrication of the Mock Up.

The QA Inspector randomly observed ZPMC welding personnel placing Weld Joint (WJ) Numbers on the WJ's between the various fit up longitudinal plates. The following photograph provides additional detail.

The QA Inspector randomly observed ZPMC welding personnel placing a 3 ton ballast block on the end of longitudinal plate piece mark mp542-1, prior to placing the root pass in WJ MUSB-MA22A/B-10, between mp536b-1 and mp542-1. The QA Inspector randomly observed that the placement of the ballast block put WJ MUSB-MA22A/B-10 into negative deflection. The following photograph provides additional detail.

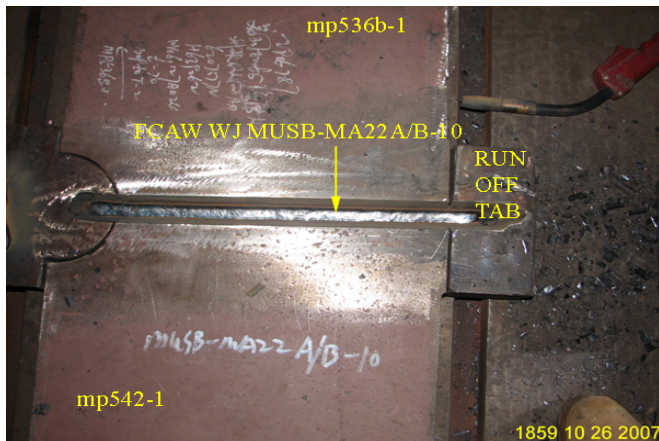
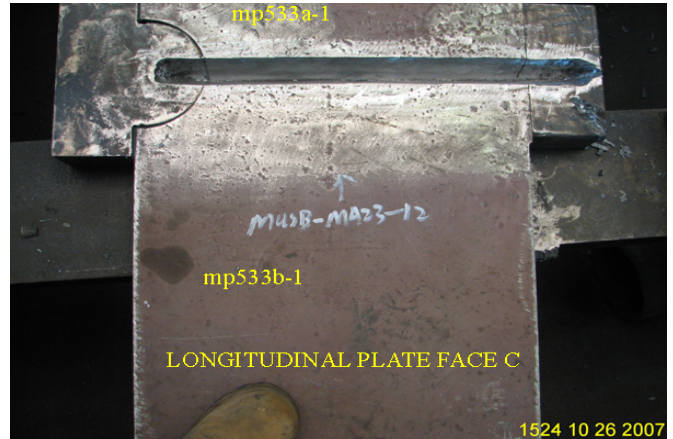
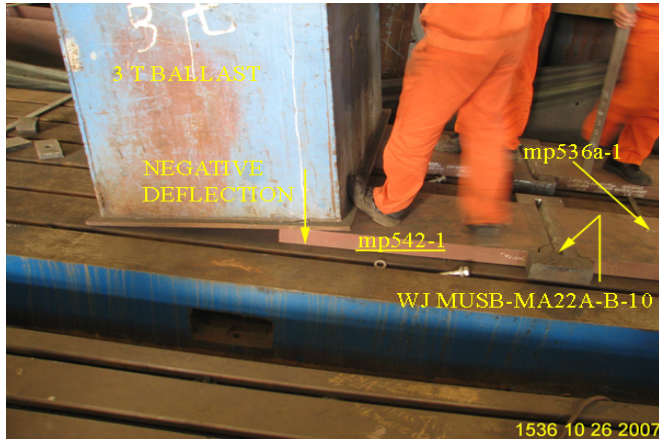
The QA Inspector randomly observed ZPMC welder Lei Li Chao, utilizing the Flux Cored Arc Welding (FCAW) process with approved ZPMC Weld Procedure Specification (WPS) WPS-B-T-2231-B-U3-F, to place the root, hot and 2 fill passes in WJ MUSB-MA22A/B-6 between longitudinal plates piece marks mp537a-1 to mp537b-1. The QA Inspector also observed Mr. Lei utilizing a chipping hammer, wire brush and a grinder to clean in between weld passes. The QA Inspector observed ZPMC CWI Xu Le Feng monitoring weld parameters. The QA Inspector also performed random verification of the weld parameters and documented them as follows: welding amperage 303 amps, welding voltage 31.2 volts with a travel speed of 280 millimeters per minute. Weld parameters appeared to comply with the above approved ZPMC WPS. The attached photograph provides

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additional detail.

The QA Inspector randomly observed ZPMC welder Lei Li Chao, utilizing the FCAW process with approved ZPMC WPS WPS-B-T-2231-B-U3-F, to place root and hot pass in WJ MUSB-MA22A/B-10 between longitudinal plates piece marks mp536b-1 to mp542-1. The QA Inspector observed ZPMC CWI Xu Le Feng monitoring weld parameters. The QA Inspector also performed random verification of the weld parameters and documented them as follows: welding amperage 300 amps, welding voltage 30.4 volts with a travel speed of 334 millimeters per minute. Weld parameters appeared to comply with the above approved ZPMC WPS. The attached photograph provides additional detail.



Summary of Conversations:

The QA Inspector asked ZPMC QA Representatives Shen xue Jun and Fu Yuhong, why a 3 ton ballast block, causing negative deflection, was being on the ends of the longitudinal plates prior to welding; and if this was part of ZPMC's fabrication procedure. The QA Inspector did not receive an answer during his shift.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

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Inspected By: Franco,Charlie

Quality Assurance Inspector

Reviewed By: Cochran,Jim

QA Reviewer